

Please add Claim 10 as follows:

--10. (New) An apparatus comprising:

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a recoverable and reusable unit which is recoverable and reusable after use; and
an environmental history indicator member disposed inside said unit or adjacent to
said unit, said environmental history indicator member having a property variable in accordance
with an environmental history of use of said apparatus and being arranged so as not to participate
in any functions of said apparatus during use of said apparatus,
wherein said environmental history indicator member maintains the state of
deterioration of the property, and
wherein the value of said variable property is determined by using an inspection device
to inspect said environmental history indicator member, so that said environmental history
indicator member comprises means for providing the value of the variable property in response to
inspection by the inspection device.--

REMARKS

Summary

Amended independent Claims 1 and 7 and newly added independent Claim 10 recite at least one feature not disclosed or suggested by the patent to Levy. Therefore, are these claims allowable over this patent?

Status of the claims

Claims 1, 2, and 4-9 have been amended to improve their form and Claims 1 and 6 have been amended to overcome outstanding rejections. Claim 10 has been added. Claims 1-10 are pending. Claims 1, 7, and 10 are independent.

Requested action

Applicant respectfully requests the Examiner to reconsider and withdraw the outstanding rejections in view of the foregoing amendments and the following remarks.

Applicant also respectfully requests that this Amendment be entered, since it is accompanied by a Request for Continued Examination.

Formal rejection

Claim 6 is rejected under 35 U.S.C. § 112, second paragraph, because the Examiner cannot determine the scope of the phrase “or thereabout”. In response, while not conceding the propriety of the rejection, Claim 6 has been amended to address the points raised by the Examiner. Applicant submits that Claim 6 now even more clearly satisfies 35 U.S.C. § 112, second paragraph.

Allowable subject matter

Applicant gratefully acknowledges the indication that Claim 6 would be allowed if rewritten to overcome the rejection under 35 U.S.C. § 112, second paragraph, and to include all of the limitations of the base claim and any intervening claims. In response, Applicant has not

redrafted this claim in independent form because the independent claim from which it depends is believed to be allowable for the reasons discussed below.

Substantive rejection

Claims 1-5 and 7-9 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,673,028 (Levy).

Response to substantive rejection

In response, while not conceding the propriety of the rejection, independent Claim 1 has been amended. Applicant submits that as amended, Claim 1 is allowable for the following reasons.

Independent Claim 1 has been amended to recite that it relates to an apparatus for indicating the history of the environmental conditions of the environment in which the apparatus is used to permit a determination of the level of deterioration of a recoverable and reusable unit of the apparatus and a determination of whether the recoverable and reusable unit can be recovered and reused.

Claim 1 has also been amended to recite that the apparatus comprises a recoverable and reusable unit which is recoverable and reusable after use of the unit and the apparatus in the environment, depending on the level of deterioration of the unit, which depends on the history of environmental conditions of the environment in which the apparatus was used.

Claim 1 also recites that the apparatus comprises an environmental history indicator member disposed inside the unit or adjacent to the unit and being arranged so as not to participate in any functions of the apparatus during use of the apparatus.

Claim 1 has been further amended to recite that the environmental history indicator member has a property variable in accordance with the history of the conditions in the environment in which the apparatus was used . In addition, Claim 1 has been amended to recite that the environmental history indicator member determines the degree of deterioration of the recoverable and reusable unit by permitting a determination of the value of the property thereof, variable in accordance with the history of conditions in the environment in which the apparatus was used. Claim 1 also recites that the environmental history indicator member maintains the state of deterioration of the property.

The Office Action cites column 14, lines 56-61 to show the elements recited in Claim 1. But this portion of the patent to Levy is not understood to disclose a device designed for indicating the history of the environmental conditions of the environment in which the apparatus is used to permit a determination of the level of deterioration of a recoverable and reusable unit of the apparatus and a determination of whether the recoverable and reusable unit can be recovered and reused, as recited by amended Claim 1. In addition, this portion of the Levy patent is not understood to disclose or suggest a recoverable and reusable unit which is recoverable and reusable after use of the unit and the apparatus in the environment, depending on the level of deterioration of the unit, which depends on the history of environmental conditions of the environment in which the apparatus was used, as also recited by amended Claim 1. Further, this portion of the Levy patent is not understood to disclose or suggest an environmental history indicator member that determines the degree of deterioration of the recoverable and reusable unit by permitting a determination of the value of the property thereof, variable in accordance with the history of conditions in the environment in which the apparatus was used, as also recited by amended Claim 1. Rather, the Levy patent is merely understood to provide, as discussed at

Column 14, lines 49-61, a thermosensitive material 20 or temperature-indicating paint that changes color to indicate that an integrated circuit chip 32 “has become too hot to work properly or reliably and should be replaced” (column 14, lines 60 and 61); the thermosensitive material 20 is not understood to indicate the history of environmental conditions or the level of deterioration of the chip 32, and the chip 32 is not understood to be disclosed to be reusable.

For this reason, amended independent Claim 1 is allowable over this patent. And since amended independent Claim 7 recites these same features, it is allowable over this patent for the same or similar reasons.

Independent Claim 10 relates to an apparatus comprising a recoverable and reusable unit which is recoverable and reusable after use, and an environmental history indicator member disposed inside the unit or adjacent to the unit, the environmental history indicator member having a property variable in accordance with an environmental history of use of the apparatus and being arranged so as not to participate in any functions of the apparatus during use of the apparatus. In addition, the environmental history indicator member maintains the state of deterioration of the property, and the value of the variable property is determined by using an inspection device to inspect the environmental history indicator member, so that the environmental history indicator member comprises means for providing the value of the variable property in response to inspection by the inspection device.

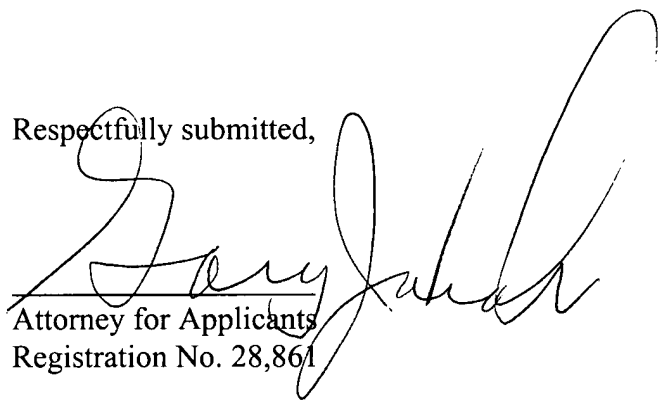
In contrast, the patent to Levy is not understood to disclose or suggest the recoverable and reusable unit or the environmental history indicator member recited by new independent Claim 10. For this reason, independent Claim 10 is allowable over the patent to Levy.

The dependent claims are allowable for the reasons given with respect to the independent claims and because they recite features that are patentable in their own right. Individual consideration of the dependent claims is respectfully solicited.

In view of the above amendments and remarks, the claims are now in allowable form. Therefore, early passage to issue is respectfully solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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MARKED-UP AMENDED CLAIMS

1. (Twice Amended) An apparatus for indicating the history of the environmental conditions of the environment in which said apparatus is used to permit a determination of the level of deterioration of a recoverable and reusable unit of said apparatus and a determination of whether the recoverable and reusable unit can be recovered and reused, said apparatus comprising:

a recoverable and reusable unit which is recoverable and reusable after use of said unit and said apparatus in the environment, depending on the level of deterioration of said unit, which depends on the history of environmental conditions of the environment in which said apparatus was used; and [said apparatus further comprising:]

an environmental history indicator member disposed inside said unit or adjacent to said unit, said environmental history indicator member having a property variable in accordance with the history of the conditions in the environment in which said apparatus was used [an environmental history of], said environmental history indicator member [use of said apparatus and] being arranged so as not to participate in any functions of said apparatus during use of said apparatus, said environmental history indicator member determining the degree of deterioration of said recoverable and reusable unit by permitting a determination of the value of the property thereof, variable in accordance with the history of conditions in the environment in which said apparatus was used,

[wherein the property of said environmental history indicator member deteriorates over time to assume a state of deterioration, and]

wherein said environmental history indicator member maintains the state of deterioration of the property.

2. (Amended) An apparatus according to claim 1, wherein said environmental history indicator member has an environmental resistivity equal to or less than an environmental resistivity of said unit [against] with respect to such an environmental factor that has an adverse effect on a service life of said unit.

4. (Amended) An apparatus according to claim 1, wherein said unit includes an optical member, and said environmental history indicator member has a property which varies according to an environmental history [in] with respect [of] to temperature and/or humidity.

5. (Amended) An apparatus according to claim 4, wherein said environmental history indicator member is an optical filter having a light transmitting property which varies according to any environmental history [in] with respect [of] to temperature and/or humidity.

6. (Amended) An apparatus according to claim 5, wherein said optical filter as said environmental history indicator member is composed of an ND filter, copper phosphate glass, gelatin or optical glass having a refractive index of substantially 1.6 to 1.65 [or thereabout] and an Abbe number of substantially 60 [or thereabout].

7. (Amended) A management system for an apparatus for indicating the history of the environmental conditions of the environment in which the apparatus is used to permit a determination of the level of deterioration of a recoverable and reusable unit of the apparatus and a determination of whether the recoverable and reusable unit can be recovered and reused, the apparatus comprising a recoverable and reusable unit which is recoverable and reusable after use

of the unit and the apparatus in the environment, depending on the level of deterioration of the unit, which depends on the history of environmental conditions of the environment in which the apparatus was used, and an environmental history indicator member disposed inside the unit or adjacent to the unit, the environmental history indicator member having a property variable in accordance with the history of the conditions in the environment in which the apparatus was used, the environmental history indicator member being arranged so as not to participate in any functions of the apparatus during use of the apparatus, the environmental history indicator member determining the degree of deterioration of the recoverable and reusable unit by permitting a determination of the value of the property thereof, variable in accordance with the history of conditions in the environment in which the apparatus was used, wherein the environmental history indicator member maintains the state of deterioration of the property [according to claim 1], said management system comprising a device to manage the apparatus, wherein a process to be applied to [said] the unit is determined according to a result of measurement, by an inspection device, of the property of [said] the environmental history indicator member.

8. (Amended) A management system according to claim 7, wherein said process to be applied to said unit is a process to determine [determined as to] whether or not said unit is to be reused.

9. (Amended) A management system according to claim 7, wherein said process to be applied to said unit is [determined as to] a process to determine whether said unit is to be reused

as it is, or to be reused after cleansing, or to be sent to a material-based classifying recycling process.

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